A new era in capital markets

Cloud computing changes the game
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Cloud computing in capital markets: moving from the periphery . . .
Cloud computing’s unique blend of scalability, flexibility, massive processing power, and cost-efficient pay-per-use pricing is seeing cloud-based solutions gain more usage in capital markets. Today, growing numbers of organizations are using the cloud to analyze data, provide applications to employees, and run special projects.
While adoption of cloud models has made great strides in some industries—and even in other areas of financial services, such as retail banking distribution—several factors have tended to hold back the usage of cloud offerings in capital markets. As a result, most cloud solutions in the industry are restricted to specific back- and middle-office activities, and commoditized areas outside core systems.

To date, we believe there have been several reasons for the relatively slow and limited progress in the adoption of cloud in capital markets. These include:

- **A historical abundance of cash and capital.** In the sustained bullish run during the years leading up to the 2008 financial crisis, the capital markets industry’s strong cash flows and capital position meant the cost and efficiency benefits offered by cloud computing were insufficient to outweigh the perceived risks. The main potential concerns lay in areas such as operational resilience, control and data security.

- **Privacy and security concerns.** Given the extreme confidentiality of trading and client data held and processed by capital markets firms, the reputational and regulatory downside of any potential breaches of data security or regulations made firms wary of using cloud solutions.

- **Legacy in-house IT systems.** In the past, capital markets firms have tended to meet their IT needs by investing heavily in highly engineered custom systems, designed and developed in-house to meet specific business requirements. The prospect of writing off these investments has made migrating to cloud offerings less attractive in functional and financial terms.

- **Siloed IT governance and skill profiles.** Traditionally, each area of a capital markets firm has tended to develop and govern its own business unit-specific IT systems and skill sets. As a result, all components of the IT stack, from front-office applications to infrastructure, have been kept within vertical architectural silos, with limited horizontal integration across the organization. At the same time, the quality of an organization’s in-house engineering capability has become a measure of the quality and importance of each “pocket” of the business, with the inherent complexity needed to support complex products and services being compounded by siloed ownership and governance. All these factors can hinder the horizontal visibility and alignment needed to fully capitalize on the opportunities presented by cloud.

... to the mainstream – via private cloud

While these barriers to cloud computing still exist to varying degrees in the capital markets sector, they are gradually being overcome as changing industry conditions bring cloud-style “XaaS” (everything as a service) models into the mainstream.

An important driver behind this trend is the increased pressure and scrutiny on costs and margins in the post-financial-crisis environment. These trends have fostered a renewed focus on achieving efficiencies, and a drive to rebalance spending on systems away from capital expenditure (capex) and toward operating expenditure (opex). This shift is one of the main impacts of using cloud-style XaaS solutions.

At the same time, the growing commercial and regulatory requirement to run powerful risk analytics on demand calls for the massive processing power and high scalability of cloud solutions. This is causing organizations and Chief Information Officers (CIOs) to re-examine their limited uptake of cloud computing, and seek out ways to overcome barriers.

However, there is still little appetite for public cloud solutions in the capital markets industry. Continuing concerns over the security and regulatory compliance of the public cloud—and the ability of public cloud offerings to meet firms’ complex functionality needs—mean the focus remains very much on private clouds and virtualization as the basis of XaaS models. Private clouds are still regarded as a more secure, vertically integrated, mature solution.

Also, although community cloud services shared between firms are emerging, there is a lack of regulatory clarity about how they can and should be used.

Alongside these broad industry trends, a number of specific market developments are increasing the attractiveness and viability of cloud solutions in the capital markets sector. We’ll now look at these various developments in more detail.
Cloud computing: a quick primer

Cloud computing is a model for providing and sourcing information technology (IT) services on a pay-per-use basis. Cloud services are "elastic"—configurable, adaptable, and scalable—and generally require less upfront investment and ongoing operating operational funding than traditional IT models.

Clouds generally take one—or a combination—of four forms: private, public, hybrid and community.

Private clouds are dedicated to a single company for private use—to deliver virtualized application, infrastructure, and communications services for internal business users. Private clouds can be built within a company's premises, or located off-premises and owned and provided by an external third party.

Public clouds are accessible to the public over a network, and are fully owned and provided by external third parties.

Hybrid clouds blend the benefits of public and private clouds, by enabling a company to retain confidential information in a private cloud, while providing access to the wider choice of cloud computing services available in public clouds.

Community clouds are collaborative resources shared between a limited number of selected organizations with common requirements and interests, often in the same industry or geographical region. Community clouds can be hosted internally or by external third parties as a managed service.

All four forms of cloud computing can provide computing "on demand" at one or more of four levels.

- At the infrastructure level, companies use Infrastructure as a Service (IaaS) offerings to source raw computing resources, processing power, network bandwidth, and storage on demand. IaaS is the most basic cloud service model.
- At the platform level, Platform as a Service (PaaS) provides infrastructure elements such as database, middleware, messaging, security, development tools, and a presentation layer that are used to develop custom applications. It provides companies with an environment that supports rapid evolution of the software development life cycle in circumstances where there is a need for continuous change.
- At the application level, software-as-a-service (SaaS) is a software application that is delivered to the end user. It encompasses any application and associated data centrally hosted on the cloud and accessed via web browsers, supporting device independence and anytime, anywhere access. Some customer relationship management companies, such as Salesforce.com, have achieved widespread take-up across many industries.
- At the business process level, cloud computing based solutions—known as business-process-as-a-service (BPaaS) offer a web-enabled, externally provisioned service for managing business processes. These solutions differ from application clouds in that they provide end-to-end process support, covering not just software but also people processes such as contact centers.
Evolving industry dynamics expand the cloud opportunity

Across the capital markets industry, early moves towards accessing the benefits of cloud computing are gaining growing momentum because of changing industry dynamics.

The foundations of the capital markets industry have been virtualized—and inherently cloud-like—since the 1980s. During the decades since, exchanges across the world have effectively acted as quasi-monopolistic cloud providers, charging fees to provide trading algorithms and services remotely and on a shared basis to market participants, while saving those users the expense and effort of creating, provisioning, and upgrading these services themselves.

Six key industry challenges—and how cloud can help

Ongoing and rapid changes in regulations, technologies, and business practices are now disrupting these established industry dynamics, and creating new opportunities and challenges that need to be understood and addressed. In particular, accelerating industry trends have combined with rising cost pressures since the global financial crisis, creating a number of new concerns for capital markets firms. And cloud computing may play a role in finding the solution to these issues.

1. Fragmentation of liquidity

In mature markets such as the U.S. and Europe, fragmented liquidity and the rising proportion of high-frequency trades are increasing the costs incurred by traditional buy-side participants—such as pension funds—and driving them to trade in "dark pools" to reduce costs. As liquidity fragments between different trading venues, firms face the challenge of deciding where they should be geographically located to achieve the best latency across a range of venues. In response, the industry is turning to "proximity centers" to host SaaS services provided by trading application and market data suppliers. These centers are strategically located to take advantage of a shorter distance to key markets and liquidity hubs, and they use high-speed, low-latency connections between vendors and the trading firms they collectively service.

2. Changing regulatory landscape

Rapid and sweeping regulatory changes have increased reporting and transparency requirements and costs for all capital markets participants, reducing industry stability and requiring firms to deal with an ever-wider array of regulators. Assuming appropriate security is in place, cloud computing solutions can facilitate faster, better integrated, and more accurate regulatory reporting, while offering firm-wide or even industry-wide automated options to help organizations comply with data retention and business continuity planning requirements.

3. More demanding customers

Clients in the capital markets industry are demanding greater transparency and lower costs. As the buy-side influence increases, customer retention becomes more challenging, and fee-based value propositions harder to sell. Cloud-based, on-demand customer relationship management (CRM) solutions with easy-to-use web interfaces can boost efficiency and effectiveness, enable institutions (rather than salespeople) to own the client relationship, and help create a single central repository of client relationships and contacts.

4. A more dynamic trading environment

Pressure to maintain trading profits and margins is driving firms to streamline processing capabilities, resulting in rationalization and virtualization of multiple physical platforms in private clouds. Building on these new models, enterprise-strength trading is now available via SaaS, and rising SaaS use can, in turn, open the way to further rationalization at a lower cost. At the same time, post-trade and back-office activities are also moving into the cloud.

5. The need for sustainable cost reduction

In the post-financial crisis world, firms need to become lean, agile, and capital-conscious, and they need to develop new operating models that provide cost reductions firms can sustain over time. Organizations will need to become data-savvy to achieve this. Cloud-based shared services and industry utilities accessed on a pay-per-use basis can help reduce costs further—by breaking down existing vertical silos and enabling more effective enterprise data transformation.
6. The need for smarter and more sophisticated risk management

Under the impact of regulatory, economic, and commercial changes, firms are increasingly taking an enterprise-wide approach to risk, and placing more emphasis on emerging investment risks. Traditional software applications such as enterprise risk engines are now available in the cloud on a pay-per-use basis, and the scalability and flexibility of on-demand cloud-based offerings can make them particularly suited for large, complex, and resource-intensive risk calculations.

Industry-specific packages migrate to the cloud

Under the combined impact of these industry challenges, cloud computing is making inroads into the capital markets industry. This partly reflects the scale of the potential savings; according to research by Celent, capital markets firms can save 10–15 percent on their costs by moving to the cloud, although the extent of these savings will vary between firms based on their existing infrastructure and future IT needs. The Celent report adds: “We believe firms with older legacy systems can save even more if their server and storage infrastructure is being virtualized for the first time.”

Among the cloud investments that have been taking place across the capital markets industry, the main focus to date has been on IaaS, PaaS, and BPaaS. Historically, SaaS has been used less, and mostly in back- and middle-office systems. And although private clouds predominate, some of the smaller capital markets players and their overseas subsidiaries have begun using virtual private cloud solutions provided by a public cloud supplier, with a dedicated “wrapper” that effectively creates a single-tenant service, allaying any security fears.

A much bigger tipping point for cloud solutions could come as a result of migrating the select handful of major industry-specific software packages to cloud platforms. As cloud-based “as a service” variants of software packages emerge, they may offer a new and more flexible delivery option for the established major participants in capital markets, and could also make these applications more available to a wider range of firms.

For example, the complexity and cost of running major capital markets platforms often puts them beyond the means of Tier 2 or 3 capital markets players in the Asia-Pacific region. But with cloud-based versions coming onto the market, these smaller market participants may, for the first time, gain access to services based on these leading platforms, at a more affordable and flexible cost. This trend could lead to a new form of market segmentation; the top-tier players would generally continue to run the software solutions on their own infrastructure on a licensed basis, while their smaller competitors would use the cloud versions.

Alongside these potential developments, and in light of the new industry dynamics outlined above, we have identified three scenarios where cloud computing could play a pivotal role in driving change and evolution in capital markets. We will now look at each of these scenarios in detail.

JPMorgan Chase Global uses PaaS to boost efficiency of software development

JPMorgan Chase has developed thousands of custom .NET and Java applications that run on the bank’s infrastructure. With tens of thousands of developers/IT staff, and servers also numbering in the tens of thousands, the bank faces a need to develop, run and manage applications at huge scale.

Seeking a more efficient way to meet this challenge, JPMorgan Chase Global Technology Infrastructure saw an opportunity to migrate the firm’s .NET and Java application portfolio and future strategy into the cloud by leveraging private PaaS. This step was aimed at providing a competitive advantage in both time and money, and helping to reshape JPMorgan’s software development and IT maturity. After evaluating various cloud platforms, the bank chose Apprenda’s private PaaS, which—deployed globally, with an enterprise-grade solution footprint—now hosts over 2,000 applications for the firm, and is used by 500 development teams and every line of business.

As well as saving JPMorgan Chase significant costs, the migration to PaaS has also delivered a wide array of other benefits to the bank. These include an improvement of over 50 days in average application time to market; a 300 percent increase in infrastructure utilization; a 700 percent boost in developer productivity for application deployment via standard productivity patterns and platform services; and the ability to leverage the platform with existing .NET and Java applications, as well as with new application development.
Three scenarios where cloud could enable industry change and evolution

In some industries, the uptake and impact of cloud solutions have escalated so rapidly that cloud computing can be called a game changer in its own right.

Yet, the nature of the capital markets industry and its justifiable aversion to risk—especially around data security—mean cloud will be adopted more gradually.

The consequences will still be substantial in the long run. To map out what these effects could be, we have identified three scenarios that illustrate opportunities for cloud computing to enable new industry strategies, business models, and/or structural changes that could have a major impact on the capital markets industry and its participants.

Reducing the end-to-end industry cost base

As firms across the capital markets industry continue to grapple with the need to reduce costs, they are examining the potential for multi-bank utilities with growing interest. Cloud computing could help enable this next generation of shared utilities, substantially reducing total industry costs. Emerging examples of this cross-industry potential include Deutsche Börse’s trading venue for cloud computing resources (see page 6), and NASDAQ’s OMX FinQcloud (see page 11).

Other industry utilities use of cloud platforms could potentially spring from the current discussions on know-your-customer (KYC) and reference data requirements. In this content, SAP Financial Services Network is another step towards industry or community clouds. The network links corporate entities and banks in a cloud-style, on-demand environment managed over a secure business network (see page 11).

Enabling new and more competitive industry structures

A second potential scenario for cloud-enabled industry-wide change would involve transforming the industry’s existing market or trading structures. As noted earlier, the traditional monolithic exchange-based market has become increasingly fragmented, with regulations such as the European Union’s Markets in Financial Instruments Directive (MiFID) and evolving U.S. Securities & Exchange Commission (SEC) rules helping to drive a proliferation of trading venues. In the U.S. alone, there are now 12 exchanges but nearly 40 percent of equity trades take place in dark pools or through internalization, according to Reuters.

At the same time, longer-term investors such as pension funds and corporate treasurers are aware that—with up to 60 percent of the trade volume on these platforms generated by high-frequency trading—they are not getting the transparency or market efficiency enjoyed by the higher-volume traders. Cloud solutions could enable these longer-term investors to see beyond the current fragmentation in market liquidity, and open up opportunities to create new market infrastructures that better serve their long-term investing needs though cloud-enabled trading structures.

Cloud computing is already changing market structures. Firms such as Markit use cloud platforms to link instant messaging hubs within individual investment banks, bypassing the traditional specialist market data providers. While this is a distinct development for new trading infrastructures, it reflects the overall direction towards creating newer, lower-cost, and more accessible market structures through next-generation cloud services.
NASDAQ OMX FinQloud

Launched in 2012, NASDAQ OMX FinQloud—powered by Amazon Web Services (AWS)—is designed as a cloud computing platform exclusively for the financial services sector. Combining AWS’ cloud computing expertise with enhanced security from NASDAQ OMX, FinQloud aims to provide firms with a cost-effective and efficient way to manage and store financial data as mandated by regulation. The platform helps firms reduce the operational costs and complexities associated with data and infrastructure management—thus enabling more effective deployment of scarce resources. A particularly strong selling point is FinQloud’s Regulatory Records Retention (R3) Storage Solution, which helps broker-dealers meet record archival and retrieval requirements at substantially reduced cost and complexity compared to traditional methods.

SAP Financial Services Network: Enabling the corporate-to-bank relationship on a business network

The SAP Financial Services Network is an on-demand solution that connects banks and other financial institutions with their corporate customers on a secure network owned and managed by SAP. The network offers multiple services over a single channel while supporting the deployment of new services. Key features include:

• Seamless process integration between financial institutions and their corporate customers
• Easy interchange of messages related to financial services, including payments, statements and more
• Simplified and secure connectivity for transacting with multiple financial institutions
• Improved visibility of payment transactions and global cash

• Low total cost of ownership (TCO), with an affordable, pay-as-you-go subscription model and minimal upfront investment

In October 2012, SAP announced an expanded program team for the SAP Financial Services Network. This move saw Bank of America Merrill Lynch, The Bank of Tokyo-Mitsubishi UFJ, Deutsche Bank, Nordea, and Standard Chartered join Citi and the Royal Bank of Scotland as co-innovators for a cloud-based services platform aimed at simplifying transactions between corporations and their financial institutions.
Transforming the cost base within the "four walls"

A third strand of cloud-driven change in capital markets is the ongoing evolution of SaaS and PaaS in the industry, helping firms to better leverage the inherent benefits around agility, scalability and speed, while simultaneously helping reduce their internal cost base.

This opportunity underlines the scale of the potential benefits from cloud. To realize these benefits, the industry needs to overcome a number of current issues and challenges—including concerns over data security, resilience, regulatory clarity, potential loss of control, and the difficulty of integrating a private cloud with service-oriented architecture to create a shared services environment. Many firms also struggle with decommissioning legacy technology, which creates a barrier to cloud adoption. The rising quality and cost-effectiveness of decommissioning services should help to lower this hurdle.

Developments on the supplier side could also help to drive the future availability of capital markets specific SaaS offerings. The capital markets industry encompasses many suppliers—including exchanges, and payments infrastructure and service providers—offering core services and software packages that have effectively become commoditized. These providers’ existing position in the capital markets ecosystem and their expertise in software delivery make them ideally placed to offer an expanding range of value-added solutions in the cloud. This would allow them to open up new revenue streams and escape from the current trap of commoditization, while simultaneously enabling client firms to reduce their internal cost bases.

As Daiwa and other firms look to realize significant business and operating cost benefits similar to those noted above, security continues to play a pivotal role in technology steering committee decisions. Financial services firms, following the initial wave of early SaaS adopters, are augmenting native provider controls with third-party security products to adequately protect themselves and their clients, focusing on access management and data protection technologies that prevent sensitive client, sales, and relationship data from being stored in public, multi-tenant clouds.

Data tokenization and encryption are popular answers to the challenges facing information security officers. Products that support these data protection capabilities are maturing, and expanding their core competencies and coverage to include more PaaS and SaaS platforms, making the extension of enterprise security controls into the cloud a reality. Many firms are extending identity- and access-management capabilities across public and private cloud environments, with federation through standards such as the Security Assertion Markup Language (SAML). These layered defenses for public and private cloud-based models are helping lower the barriers to adoption, and increasing confidence that businesses can realize benefits without compromising security.
Daiwa adopts Salesforce for cloud-based CRM

When Daiwa Securities SMBC Europe Limited decided to implement a new customer relationship management (CRM) system, its criteria included low cost, global accessibility, low maintenance and low risk. After examining a number of CRM systems on the market, Daiwa selected Salesforce. By offering the application on demand as an Internet service, salesforce.com eliminates the need to buy, install or maintain hardware, software or networks. Independent reports show that it is implemented at a fraction of the cost of traditional enterprise software.

According to Daiwa, one of the main benefits following the implementation was a boost to client relationships because Daiwa could provide better service, and because the bank now owns the client relationship, not the salesperson. The cloud-based CRM has eliminated islands of information and salespeople recording contacts in Excel spreadsheets on PCs and laptops, on scraps of paper or in their heads.

The system plays a dual role in Daiwa’s operations: it operates as a capital markets tool and captures details on clients issuing bonds; and it acts as a sales tool for dealers selling bonds. The bank says it now has far greater transparency between both sides of its operations, and that using Salesforce has enabled it to become more efficient when matching buyers and sellers—and when identifying business opportunities.

State Street’s move to cloud

“Our move to cloud computing is part of an overall transformation program that we announced in November 2010. It combines both operational redesign and the concurrent changes in our technology infrastructure to support that.

“We take care of trillions of dollars of other peoples’ assets. We have enough scale initially to build a private cloud. We designed our cloud as our POD, for ’Processing On Demand’ structure. It fits in our data centers, and we built security framework around it. We have about 40-50 applications on it today, and we’re in the process of migrating over 100 applications in process. And all our new development goes on to it. It’s both a processing cloud and a data cloud.

“It has been in production for about a year now. We started with applications that are lower in volume and lower in complexity, but now we have our newest more complex apps running on it. And we’re now bringing out some pretty powerful data tools that are also sitting on it. It’s our architecture for the future.”

—Chris Perretta, CIO of State Street Corporation, quoted in Forbes Magazine, January 7, 2013
Where will the cloud take off first?

Internal operating models will leverage cloud . . .

As already noted, capital markets firms increasingly use cloud solutions for specific activities such as application development, CRM, and complex analytics. At the same time, their ongoing wider efforts to optimize their operations, cut costs, and switch from capex to opex will see a number of common processes in their operating models become open to commoditization. These same processes could be outsourced to third-party providers, potentially cloud-based.

As outsourcing to the cloud moves onto the agenda, there are implications for the “grid legacies” that a large number of capital markets players have been raising for the past decade. Many firms have tried to outsource these with limited success, partly reflecting the poor market value of those assets. However, these strategies did not involve cloud models, and there is now potential for “grid legacies” to be replaced by hybrid cloud-enabled capabilities that blend cloud, in-house and traditional outsourced service provision.

More generally, in our view, the shift towards cloud computing will impact the IT and business functions of capital markets firms. On the IT side, new solutions will be increasingly cloud-enabled, with firms looking for end-to-end application management and production environment support on a pay-per-use basis. And on the business side, firms will seek out opportunities for cloud-enabled business process outsourcing (BPO), and look to integrate infrastructure and applications that support pay-per-use BPaaS solutions.

. . . as horizontal and vertical BPaaS opportunities emerge

The prospects of rising cloud uptake are further boosted by recent shifts in capital markets industry operating models. The global financial crisis marked a watershed in firms’ approach to outsourcing activities to third-party providers. Before the financial crisis, third-party providers were used almost exclusively for horizontal back-office processes that traverse the operating model, rather than touching core systems and processes. After the financial crisis, in a more cost- and margin-constrained environment, the focus for BPO—and increasingly BPaaS—has expanded to include entire end-to-end vertical processes running from the front to the back office.

Today, firms are examining opportunities to provision horizontal and vertical processes on an on-demand, pay-per-use basis from cloud-based industry utilities. These services would generally be provided on a “wrapped” basis, enabling sensitive trading, financial, or customer data to remain internal to the institution or institutions that own it.

The likely “hot spots” for cloud-based BPaaS within capital markets firms will vary between different segments of the industry. For trading businesses, the horizontal processes they were already starting to outsource prior to the financial crisis—and for which outsourcing is now increasingly viable through traditional BPO or cloud-based utility solutions—include:

- Research, BPO and utilities
- Market and reference data, corporate actions, BPO and utilities
- Client onboarding, KYC processes, and BPO

These horizontal candidates for external sourcing are now being joined by a number of vertical—or core-product—processes that are moving within the scope of BPaaS. These include:

- In investment banking, end-to-end post-trade processing—all the way from trade capture, confirmation, and payment through to posting on the ledger—using a dedicated specialized processing utility. These vertical solutions have the potential to start with simpler asset classes and expand to more complex ones.
- In corporate banking, post-trade processing of structured loans presents clear potential for being provided via a BPaaS model tailored for that specific vertical process.

For wealth and asset management firms, the horizontal processes that could be provided via the cloud echo those in trading businesses:

- Research, BPO and utilities
- Market and reference data, corporate actions, BPO and utilities
- Client onboarding, KYC processes and BPO.

However, wealth and asset management operating and business models reveal a different set of vertical processes that are most likely to be sourced from the cloud. They include:

- Fund administration and accounting
- Client portfolio administration and accounting
- Cross-product processing, by applying a BPaaS model adapted for asset managers
Fidelity uses private cloud to “Click2Compute”

In 2012, Fidelity launched an internal cloud environment called Click2Compute—a private cloud platform providing computing on demand, where internal customers can dynamically self-provision environments. Based on “white box” hardware with open-source programming at its heart, Click2Compute enables fully automated server deployment patching, and provides secure platforms where audit reporting is integrated with existing control systems. Click2Compute can deploy 10 runtime stacks on three different operating systems, and uses roles-based security access with dashboards for billing and customer reporting. Fidelity is examining PaaS opportunities.

CBRE Clarion Securities migrates to Portware’s cloud environment for multi-asset trading

CBRE Clarion Securities is a global investment management firm with over US$20 billion in assets under management, specializing in real estate and infrastructure securities. In 2012, CBRE Clarion migrated to Portware’s cloud-based multi-asset trading solution, enabling it to reduce operational overheads, eliminate ongoing support costs, and drive a measurable increase in bottom-line performance. The migration followed CB Richard Ellis Investors’ acquisition of ING Clarion Real Estate Securities in 2011. As part of the deal, CBRE needed to determine the smartest way to marry the two firms’ infrastructures. CBRE had historically deployed Portware Enterprise in its internal data center, relying on the system to automate its traders’ complex workflows. The decision to migrate CBRE Clarion to the Portware cloud reflected the support and high availability that CBRE was already realizing from the Portware cloud environment, without having to compromise on the advanced trading technology and customization it was accustomed to with its legacy Portware Enterprise platform. The firm also needed to support traders in Europe and Asia, and outsourcing the system proved more economical than trying to add internal staff to cover its 24-by-6 operations.
Growing competitive advantage and market leadership through cloud technologies

Cloud offerings and technologies are rapidly maturing and are capable of providing unique advantages to capital markets.

To assist in developing the journey to cloud, Accenture has devised a cloud adoption matrix to help your company understand your current position and plan the best next steps.

The matrix divides the journey to cloud maturity into five main phases:

1. **Core IT**: fundamental infrastructure and applications. The cost driven simplification and standardization which CIOs have focused on for years.

2. **Operational excellence**: IT tries to internally improve. Typically this is when IT focuses on processes and tools to improve operations.

3. **Advanced technology**: IT innovates to improve service to the business. Primarily this phase is when the initial implementations of cloud occur and IT tries to provide services rather than technology to the business.

4. **Service integration** has IT further down the path of business enabler and rather than building solutions, IT is sourcing the right solutions to meet business needs. IT also starts to manage the solutions and act as an integrator to the business.

5. **IT as a business** is when IT turns the corner from technology provider to service solution. The business is truly separated from “how” services are provided and IT works with the business to determine “what” services are of value.

Each of these phases has an additional dimension of maturity and again, there are five levels:

1. **IT supply comfort**: standard IT with low business value. The business gets consistent service at low cost but not necessarily at the quality or speed they want.

2. **Product leadership**: IT is not providing incremental value to the business by enabling requirements such as big data and analytics. The business is seeing better and speed from IT due to the adoption of Industry leading practices.

3. **Customer intimacy**: The business sees a change in IT. IT is now becoming focused on solving business problems and deviating from "one size fits all" solutions. Customer Centric applications and Social Media support become part of IT.

4. **Competitive leadership**: IT parts to become a valued part of the business. IT now begins to help the business gain competitive leadership by enabling faster delivery of services and products. IT helps the business become global and personalized to the customer.

5. **Market leadership**: IT becomes part of the business solution. Mobility, social media, analytics, and the digital agenda create true differentiation for the business.

Where each capital market business is on the maturity scale will vary, as well as the rate of change at which each moves. Ultimately, your market position and competitive landscape will determine how rapidly you adopt cloud and undertake your journey.
Cloud maturity model for the capital markets industry

Market leadership
- Mobile applications portfolio
- Customer configurable applications, research and information

Competitive leadership
- Business agility and innovation (speed to market)
- Personalized research
- Global data and app synchronization

Customer intimacy
- Big data analytics, including social media
- Customer-centric applications

Product leadership
- Industry leading practices
- Portfolio and operational governance driven by business requirements
- Big data and analytics

IT supply comfort
- Low cost IT and TCO focus
- IT internal improvements
- Stable and resilient operations

Core IT
- Compute, network and storage consolidation
- Simplify and standardize infrastructure
- Email and collaboration tools
- Back office improvements

Operational excellence
- Operational KPIs, metrics and SLAs with business input
- ITIL, COBIT and other industry standards implemented
- High level of virtualization

Advanced technology
- Technology insights for business
- Service focus
- IaaS and SaaS implementations
- Initial public cloud usage

Service integration
- Hybrid cloud implementation
- PaaS implementations
- Mobility enabled
- Business separation from technology

IT as a business
- Full service catalog
- Cloud-first philosophy
- Everything as a service
- Business "what", IT "how"
- IT business management

Value levers

1
2
3
4
5
Cloud is enabling leaders to change the game

For several reasons—security concerns, legacy investments in custom applications, siloed IT governance, intensifying regulation, and relatively available capital—cloud computing’s immediate impact on capital markets has lagged behind that in many other industries.

And while the increased cost focus since the financial crisis has fostered greater uptake of cloud computing, many of these same factors contributed to keeping firms’ initial forays into the cloud focused on virtualization and private clouds.

However, as ongoing advances by cloud providers continue to address capital markets firms’ concerns over security and functionality, the rise of cloud-style pay-per-use provisioning will have a growing impact. Cloud-based solutions offer the industry the chance to evolve in three key dimensions: reducing end-to-end industry costs; improving market and industry structures; and limiting IT and operating costs within the “four walls”.

At the same time, we believe the use of on-demand, third-party solutions within firms will expand from BPO in horizontal processes, to BPaaS across both horizontal and vertical processes. As more cloud-based offerings emerge to meet this demand, this will expand the industry’s traditionally monolithic and relatively monopolistic cloud supplier base—historically centered around exchanges—to a more diverse and dynamic provider community, including industry-wide utilities targeting specific vertical processes.

Firms that seize the cloud opportunity will gain greater agility, scalability, and speed, bringing them a competitive edge, and positioning them as the industry leaders of the future. Those that ignore this opportunity may find themselves playing catch-up. The race is on.
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Bob Gach is Accenture’s Global Capital Markets Industry Managing Director. He is responsible for setting strategy, developing Accenture’s points of view and offerings, establishing investment priorities, managing large global accounts and working with our global account teams to serve the needs of our clients. Bob leads a global team located in each major capital markets center as well as our dedicated solution centers for Capital Markets located in cities such as Paris, Mumbai, Shanghai and Madrid.

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Mark is a senior manager in Accenture’s Infrastructure and Cloud Strategy practice. Since joining the company in 2012, Mark has worked on large-scale IT-enabled change programs focused on strategy and planning. He has significant IT Transformation experience including strategy, planning, organizational change, private and public cloud, data center facilities, infrastructure, network, end user computing and applications.

Mark is a Six Sigma Master Black Belt with experience in process design and reengineering.

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Steve Scemama is a Managing Director of Accenture’s global capital markets leadership team, leading capital markets technology offerings and trading platforms business services globally. He oversees the group’s technology vision and strategy, technology investment priorities and supporting network of alliance partners. Steve works with investment banks to transform their business and IT organizations, supporting the visioning of operating model/IT architecture, the implementation of trading solutions, and the development of alternative sourcing approaches to best leverage nearshore and offshore capabilities for end-to-end services.

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References


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Accenture is a global management consulting, technology services and outsourcing company, with approximately 281,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$28.6 billion for the fiscal year ended Aug. 31, 2013. Its home page is www.accenture.com.

About Accenture Cloud

Accenture is uniquely positioned to help organizations use the cloud for competitive advantage within a complex digital marketplace. With a full range of cloud services, from strategy and implementation to migration and a cloud brokerage, we help clients plan for, integrate and manage in a hybrid world where cloud and legacy systems co-exist. We combine those insights with our industry knowledge, delivery experience and diverse ecosystem to drive innovation and transform complex environments into high-performing digital businesses. Accenture has worked on more than 8,000 cloud computing projects for clients, including nearly 70 percent of the Fortune Global 100, and has more than 9,000 professionals trained in cloud computing.

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